

Claims

alternative

1. A roller chain for continuously guiding and/or stretching the width of a textile material web in a material web stretching machine comprising inner and outer members (3, 4) successively connected in an alternating manner via chain joints,

(a) whereby every inner member (3) is comprised of two inner tabs (5) as well as two sleeves (6) connecting the inner tabs (5) with each other, and each outer member (4) is comprised of two outer tabs (7) as well as two bolts (2) connecting the outer tabs (7) with each other;

(b) whereby each sleeve (6) is coaxially supported on the associated bolt (2) in a rotatable manner; <sup>14</sup>

(c) whereby provision is made coaxially on the outside of the sleeve (6) for a running roller (9) as an outer ring (12) of a ball bearing (10) to be supplied via a lubrication channel (18) leading through the interior of the bolt (2); <sup>15</sup> <sup>16</sup> <sup>17</sup> <sup>18</sup>

(d) whereby the ball bearing (10) comprises an inner ring (11) coupled with the sleeve (6), and at each end a coaxial sealing ring (15) axially resting against the ball bearing; and <sup>20</sup> <sup>21</sup>

(e) whereby the inner tabs (5) are unrotatably pressed onto the sleeve (6) axially against the inner ring

(11) of the ball bearing via a spacing element  
bridging the sealing ring (15) in terms of  
transmission of force; 27

NPC 25

indefinite 26

characterized in that

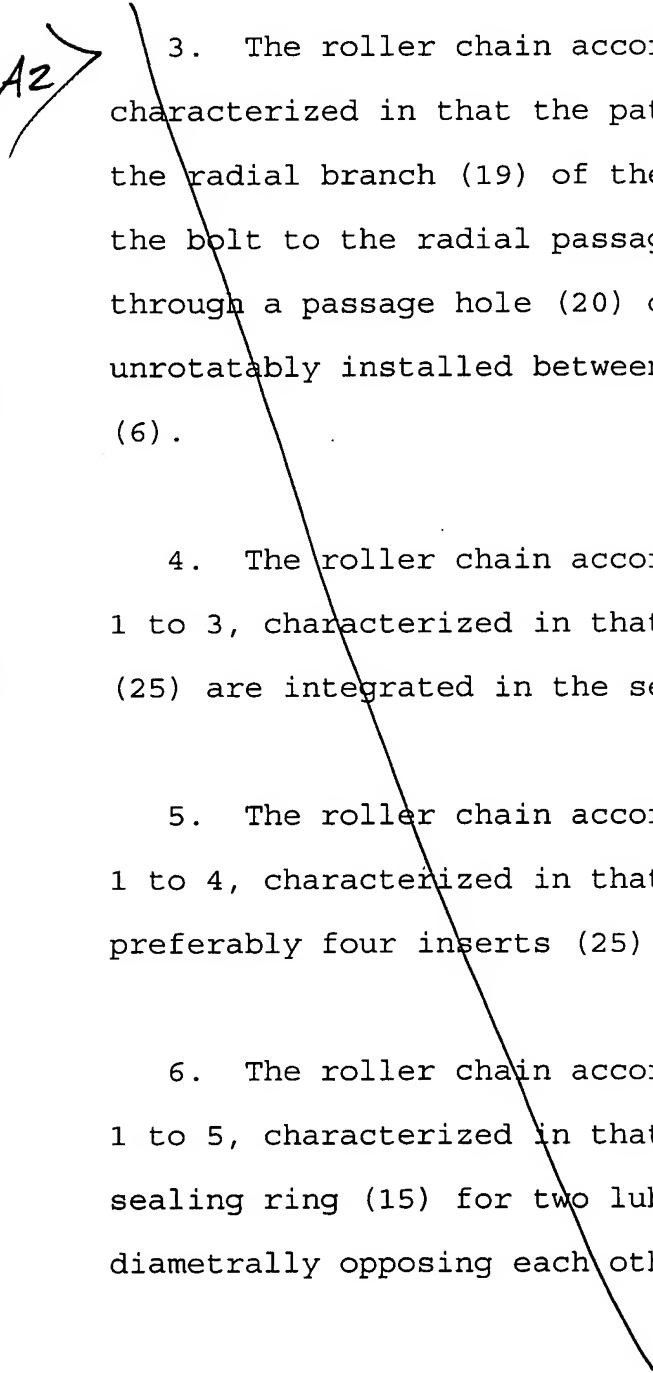
(f) the sealing ring (15) is substantially made of plastic and unrotatably coupled with the adjacent inner tab (5);

(g) the spacing element in the form of individual metallic inserts (25) approximately equally distributed in the circumferential direction (U) of 34  
the bolt, is integrated in the sealing ring (15); 34

(h) each insert (25) reaches approximately axially 35  
through the sealing ring (15), whereby the overall 36  
cross section of all inserts (25) measured in the plane of the ring is small vis-à-vis the ring area;  
and

(i) the surface of the sealing ring facing the ball bearing (10) has at least one lubrication groove 48  
(22) connecting the lubrication channel (18) of the bolt with a radial branch (19) and a lubrication hole (21) of the sleeve (6) with the interior (13) 49  
of the ball bearing, said lubrication hole having 45  
been brought to coincide with said bolt lubrication channel.

2. The roller chain according to claim 1, characterized in that the inserts (24) have a hardness in the order of magnitude of the hardness of the inner tab (5) and the inner ring (11) of the ball bearing.

*Sub A2*   
3. The roller chain according to claim 1 or 2, characterized in that the path of the lubricant leads from the radial branch (19) of the lubrication channel (18) of the bolt to the radial passage hole (21) of the sleeve (6) through a passage hole (20) of a sliding bush (8) unrotatably installed between the bolt (2) and the sleeve (6).

4. The roller chain according to at least one of claims 1 to 3, characterized in that balls serving as the inserts (25) are integrated in the sealing ring (15).

5. The roller chain according to at least one of claims 1 to 4, characterized in that provision is made for three, preferably four inserts (25) in each sealing ring (15).

6. The roller chain according to at least one of claims 1 to 5, characterized in that provision is made in the sealing ring (15) for two lubrication grooves (22) diametrically opposing each other.

7. The roller chain according to claim 6, characterized in that the lubrication groove (2) extends radially with respect to the axis (1) of the bolt.

Sub A3

8. The roller chain according to claim 6 or 7, characterized in that the lubrication groove (22) generally leading radially outwards comprises a reversing barrier (28) in a ring area (30) located about axially above the (ring-shaped) interior (13) of the ball bearing.

9. The roller chain according to at least one of claims 1 to 8, characterized in that the sealing ring (15) is connected with the adjacent inner tab (5) with torsional strength with the help of a cam (31).

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